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IMPAIRED SEX-ROLE IDENTIFICATION IN SCHIZOPHRENIA

by

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This thesis is submitted to fulfill a requirement for the  
degree of Doctor of Medicine at the Yale School of Medicine





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## IMPAIRED SEX-ROLE IDENTIFICATION IN SCHIZOPHRENIA

### Introduction

Sex-role identification by schizophrenics is strikingly different from that of normal men and women. Parsons and Bales<sup>(23)</sup> found that normal men are assertive and tend to assume more "technical, executive and 'judicial' roles" whereas normal females are emotionally expressive and assume "supportive, integrative and 'tension-managing' roles."<sup>(23,p 101)</sup> By contrast, male schizophrenics are typically passive and withdrawn while female schizophrenics are noisy and hard to manage.<sup>(1,22)</sup>

Using the MMPI, Gross<sup>(6)</sup> found male schizophrenics to be withdrawn while the females exhibited an "overtly emotional behavior pattern."

Cheek<sup>(1)</sup> studied the way schizophrenics behaved with their families. She found that compared to normal males, schizophrenic men were low in total activity and in "dominance behavior"; female schizophrenics were more active and more dominating than the female controls.

In his studies of male and female schizophrenics, Holzberg<sup>(7)</sup> found many differences between normal and schizophrenic females. Normal females viewed mother as weak and passive and father as strong, whereas female schizophrenics saw mother as powerful and father as weak. Furthermore, in contrast to normal females, schizophrenic women perceived their parents as evil and themselves as even more evil.





McClelland and Watt<sup>(22)</sup> formulated and tested a theory of sex-role alienation in schizophrenia, in which they postulated that schizophrenics never adopt the appropriate sex-role for their biologic gender. Thus if a normal man is assertive, the schizophrenic is passive and withdrawn. Similarly, if a normal woman is socially flexible, the schizophrenic woman is belligerent and aggressive. They compared male and female chronic schizophrenics with male and female controls using a series of measures designed to tap different levels of sexual identity. They found no significant differences in the tests of conscious interests and attitudes.

Two tests of more profound levels of sexual identity in their study showed significant differences between schizophrenics and controls. In a test of role-preferences the male schizophrenics chose female, or non-male, roles significantly more frequently than the controls. Moreover, in a test of satisfaction with body-parts, normal men were satisfied with more parts than normal women; among the schizophrenics the females were satisfied with more parts than the males. "It is as if female schizophrenics have become insensitive to their appearance (like normal males), and male schizophrenics have become more sensitive to how they look (like normal females)"<sup>(22)</sup>

McClelland and Watt studied chronic schizophrenics with an average hospitalization of over ten years and controls who were not hospitalized. This raises the question: Could sex-role alienation result from prolonged hospitalization? The two significant tests in their study



viz., role-preference and body-parts satisfaction, were therefore included in the present study of a group of less chronic schizophrenics and a hospitalized group of controls.

McClelland and Watt found that sex-role alienation was elicited by the tests which probed most deeply into unconscious areas of sexual identity. The appreciation of humor depends to a large extent on unconscious determinants. The Mirth Response Test of Levine and Redlich<sup>(13-21,24-26)</sup> taps many underlying conflicts and anxieties, including sex-role identification. This test showed that failure to understand a cartoon usually identified an unconscious problem. Levine and Redlich<sup>(19)</sup> found that although the ability to understand cartoons depended largely on basic intelligence, "psychiatric patients failed to understand many cartoons because of emotional rather than intellectual factors."

On this basis I predicted that schizophrenics, having failed to make the normal identification with their sex-roles, would have difficulty understanding cartoons portraying abnormal sex-roles. Accordingly, a Mirth Response test was constructed for the present study.



## METHOD

SUBJECTS: There were four groups of subjects: 20 female schizophrenics, 20 male schizophrenics, 10 female controls, and 10 male controls. As in McClelland and Watt's work, all subjects were white and between the ages of 20 and 50. In contrast to their study, all subjects (in this study) were hospitalized. The schizophrenics were chosen from the psychiatric wards of the West Haven Veterans' Administration Hospital and from Fairfield Hills, a Connecticut state mental hospital. The staff was asked to select patients with the diagnosis of schizophrenia who had been in the hospital more than two weeks and less than two years. Most of the male schizophrenics were from the VA, and most of the female schizophrenics from Fairfield Hills. All of the controls were hospitalized medical patients who, in the judgment of their doctors, were not schizophrenic and did not suffer from terrible diseases. All ten male controls came from the VA; all ten females from the Yale-New Haven Hospital. The four groups of subjects were matched according to age, intelligence and years of education. (See Table I).





TABLE I

Background Characteristics of Male and Female ~~Control~~ and  
Schizophrenic Groups Studied

Background characteristic	Males		Females	
	Controls (N 10)	Schizophrenics (N 20)	Controls (N 10)	Schizophrenics (N 20)
Age				
Mean	32.0	28.4	30.6	38.8
SD	11.2	7.9	11.1	6.2
Education (in years)				
Mean	12.5	12.4	11.0	12.0
SD	2.6	2.4	2.7	2.1
Verbal IQ				
Mean	104.5	103.6	95.3	102.0
SD	9.4	14.0	13.4	11.3
Hospitalization (in months)				
Mean	2.4	4.1	< 1.0	4.9
SD	3.0	3.0	0.0	4.2



## MEASURES:

Interview and IQ test. Each subject was asked for age, years of education and duration of hospitalization. For the verbal IQ, the Ammons Picture Vocabulary Test was employed.

Role-preference test. This test is identical to the one used by McClelland and Watt<sup>(22)</sup>. Each subject was asked which part he would like to take in a play if given the following choices:

old grandfather	vs. old grandmother
angel	vs. Lord
scientist	vs. fashion designer
sister	vs. brother
Devil	vs. witch
secretary	vs. policeman
cow	vs. bull

The score consisted of the number of choices that were roles not of the subject's own gender.

Body-parts satisfaction. This test, too, is from McClelland and Watt.<sup>(22)</sup> Every subject was given twenty 4 x 6 inch cards, each of which had the name of a part of the body typed on it. He was asked to separate the cards into two different groups: parts with which he was satisfied and parts with which he was dissatisfied. Eight parts



were considered more feminine: lips, face, eyelashes, facial complexion, skin, hips, thighs, legs; seven were considered more masculine: ears, shoulders, back, elbows, hands, fingers, hair on body; and five were non-specific: eyebrows, skin color, knees, profile, teeth. The scores were the total number of cards in the satisfied pile and the sub-totals male and female body-parts.

Mirth Response Test. From a collection of several thousand magazine cartoons two major types of cartoons were selected: normal, including non-sexual cartoons showing nonsense and aggression and normal sex cartoons with men and women in normal roles, and abnormal<sup>\*</sup>, in which men and women are shown acting in ways different from the normal, e. g., weak men and strong women. In the final grouping there were twenty cartoons in all: ten normal, of which five were non-sexual and five normal sex, and ten abnormal cartoons of which five portrayed abnormal male roles, three abnormal female roles, and two ambiguous sexual identity. The twenty cartoons were then arranged so that similar cartoons were not grouped together.

---

\* The word "abnormal" here is meant to imply that the cartoons represent people in abnormal sex-roles; e.g., men not acting like normal men, women not acting like normal women, or individuals whose sexual identity is ambiguous. In no way is it meant to imply that the cartoons themselves are abnormal. This clarification applies to the use of "abnormal" throughout this paper.





The subject was told that he would see the entire set of cartoons three times. In the first phase, called Free Expression, the subject was asked to look at each cartoon and place it face down once he understood it. Meanwhile his non-verbal mirth response was noted and recorded (0 for negative response, 1 for no response, 2 for half smile, 3 for full smile, 4 for half laugh, and 5 for full laugh). In the next phase, Sorting, the subject separated the cartoons into three groups: like, dislike and indifferent. This choice was recorded for each cartoon and scored 0 for dislike, 1 for indifferent and 2 for like. The cartoons were rearranged to the original order for the last phase, Inquiry. The subject was asked to explain what each cartoon meant. If he had trouble, he was asked to describe what he saw in the cartoon. The explanations were recorded verbatim and comprehension was scored 0 for totally wrong, 1 for partially correct and 2 for completely correct.

For analysis, all the data from the mirth response test were punched on IBM cards. Analyses of variance and correlations were carried out at the Yale Computer Center.

To check the reliability of the comprehension scoring another judge scored the answers of thirty subjects from the written accounts of their explanations of the cartoons. The total scores for each subject by the two judges were compared and the correlation co-efficient was 0.95.

Furthermore, of the six hundred separate comprehension scores there was total agreement in 497 cases (200 expected by chance alone), 6 total disagreements, i.e., comprehension scores differing by 2 (133 expected by



chance) and 97 partial disagreements, differing by 1 (267 expected by chance).



## RESULTS

### Role-preference and Body-Parts Satisfaction Tests.

The two tests which McClelland and Watt found significant were repeated with the subjects of this study. Their findings were not confirmed, for no significant differences were found between male schizophrenics and male controls or between female schizophrenics and controls. Results of tests on the male and female schizophrenic groups were re-examined to see if abnormal scores on either the role-preference or body-parts satisfaction tests would distinguish patients with more disturbed comprehension of the abnormal cartoons as compared with the normals. This did not prove to be the case. However, among male schizophrenics, those who chose inappropriate roles had lower comprehension for all cartoons.

### Mirth Response Test: The Groups and Sub-groups of Cartoons

Analysis of the data from the mirth response test revealed a number of findings which support the basic hypotheses about schizophrenics' problems with sexual identity as revealed in their humor behavior (see Charts II, III, IV and Figures I and II). Comprehension proved to be the most important parameter in differentiating the groups of subjects. For the total group of twenty cartoons schizophrenics had lower comprehension scores than controls ( $p < .005$ ). Schizophrenics understood the group of normal cartoons about as well as controls, but





they failed to understand the abnormal cartoons *more often than* controls.

Whereas controls understood the two groups of cartoons about equally, schizophrenics misunderstood the abnormal cartoons more than the normal cartoons ( $p .01$ ). When comprehension of the five subgroups of cartoons was examined there were no significant differences between controls and schizophrenics for either the non-sexual cartoons or the normal sex cartoons. However, for each of the three abnormal subgroups, abnormal male, abnormal female and ambiguous identity, the schizophrenics had significantly lower comprehension than the controls ( $p$  values all less than  $.01$ ).



COMPREHENSION:  
DIAGNOSIS x CARTOON TYPE

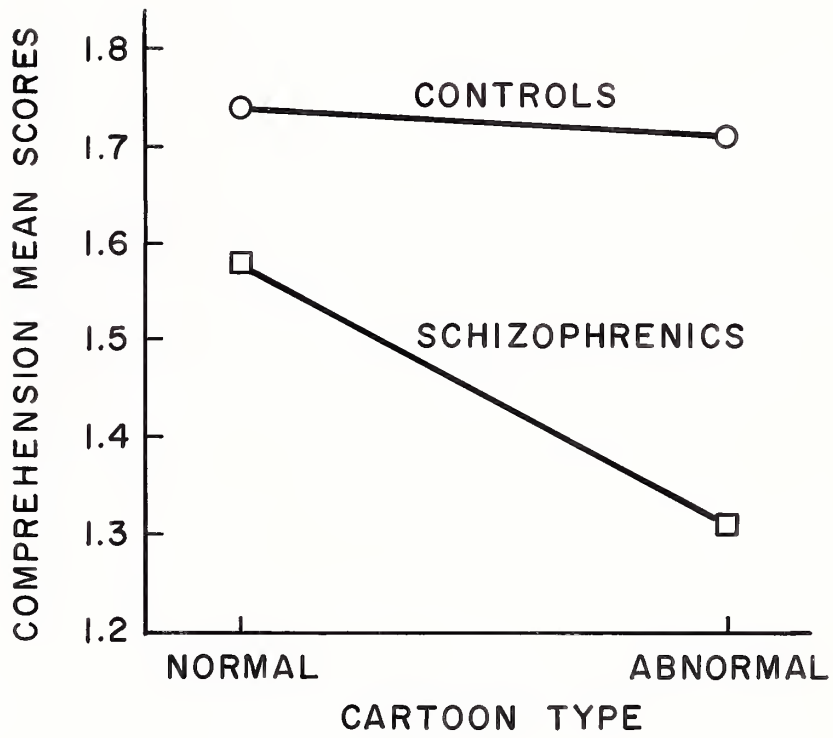
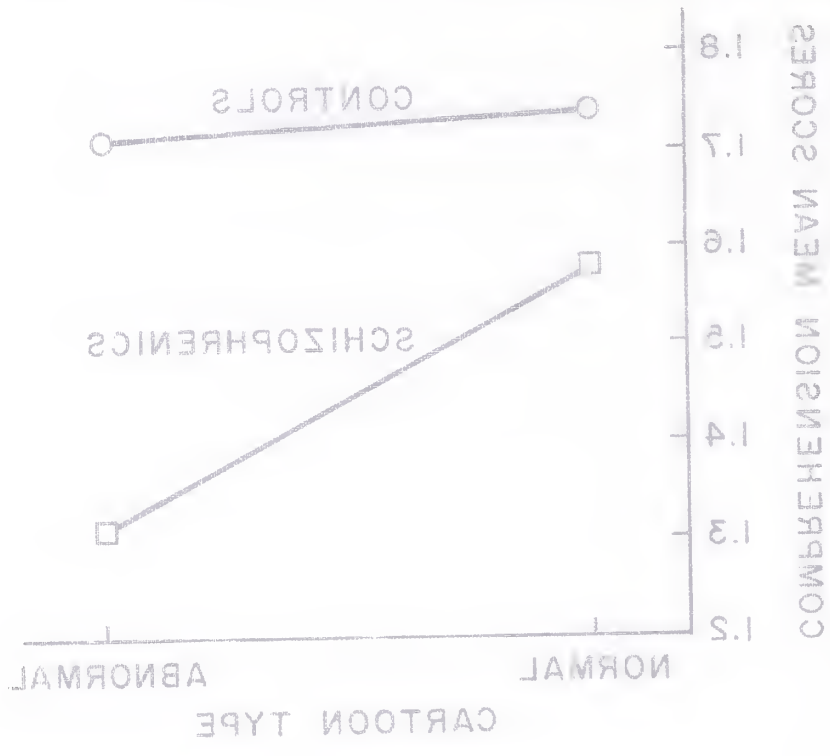


Fig. I

COMPREHENSION:  
DIAGNOSIS x CARTOON TYPE



Males in general understood the cartoons better than females (p less than .05). There was greater male comprehension of two of the sub-groups: the normal sex cartoons (p less than .05) and the ambiguous sexual identity cartoons (p less than .05). No significant differences were seen in the non-sexual, abnormal female or abnormal male sub-groups.

As expected, the total group of subjects preferred the normal cartoons to the abnormal (p less than .0005). Controls and schizophrenics showed no significant differences in the preferences of the cartoon subtypes except those of ambiguous identity where schizophrenics disliked them more than controls (p .01). Females showed no significant differences in preference of the cartoon groups but males preferred the normal group to the abnormal (p < .05).

For all subjects taken together each of the three sub-groups, non-sexual, normal sex, and abnormal female were understood better than the abnormal male cartoons (p values less than .01). Furthermore the ambiguous group was misunderstood significantly more than each of the other four sub-groups (p values less than .01) and the normal sex cartoons were understood better than the abnormal male cartoons (p less than .01).

The schizophrenics understood the non-sexual, sexual and abnormal female cartoons better than the abnormal male cartoons (p values less than .01) but they understood the ambiguous cartoons least of all (p less than .05). Among the controls the only significant difference of this type was greater comprehension of abnormal female than of abnormal male cartoons (p less than .05). Males understood the non-sexual and normal



sex cartoons better than either the abnormal male ( $p$ 's less than .01) or the ambiguous sexual identity cartoons ( $p$ 's less than .01). Females had better comprehension of the non-sexual, normal sex and abnormal female cartoons than of the ambiguous ones ( $p$  values less than .01). Also, the women understood the abnormal female cartoons better than either the normal sex ( $p$  less than .01) or the abnormal male cartoons ( $p$  less than .01).





COMPREHENSION: DIAGNOSIS x CARTOON TYPE

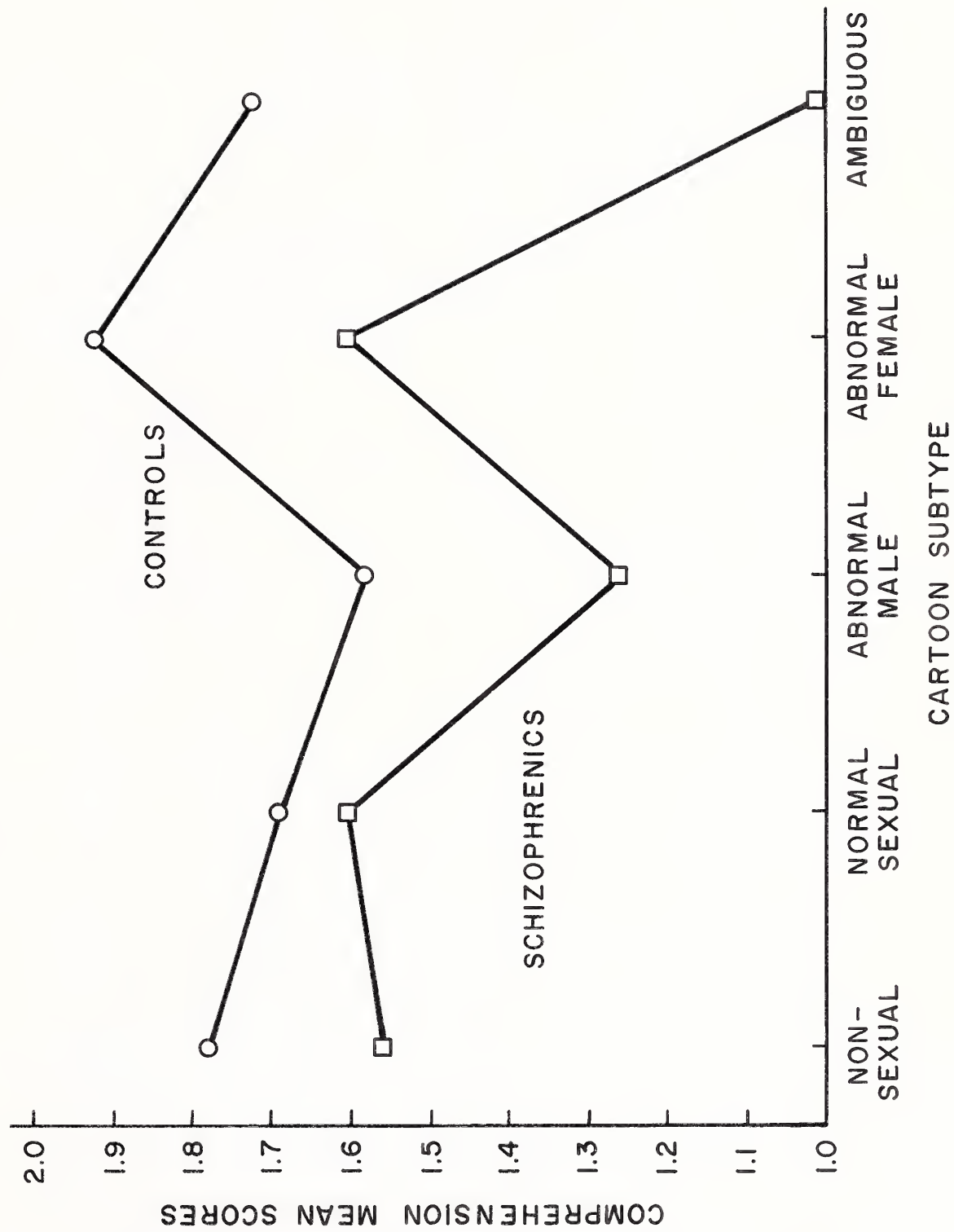


Figure II

# COMPREHENSION: DIAGNOSIS x CARTOON TYPE

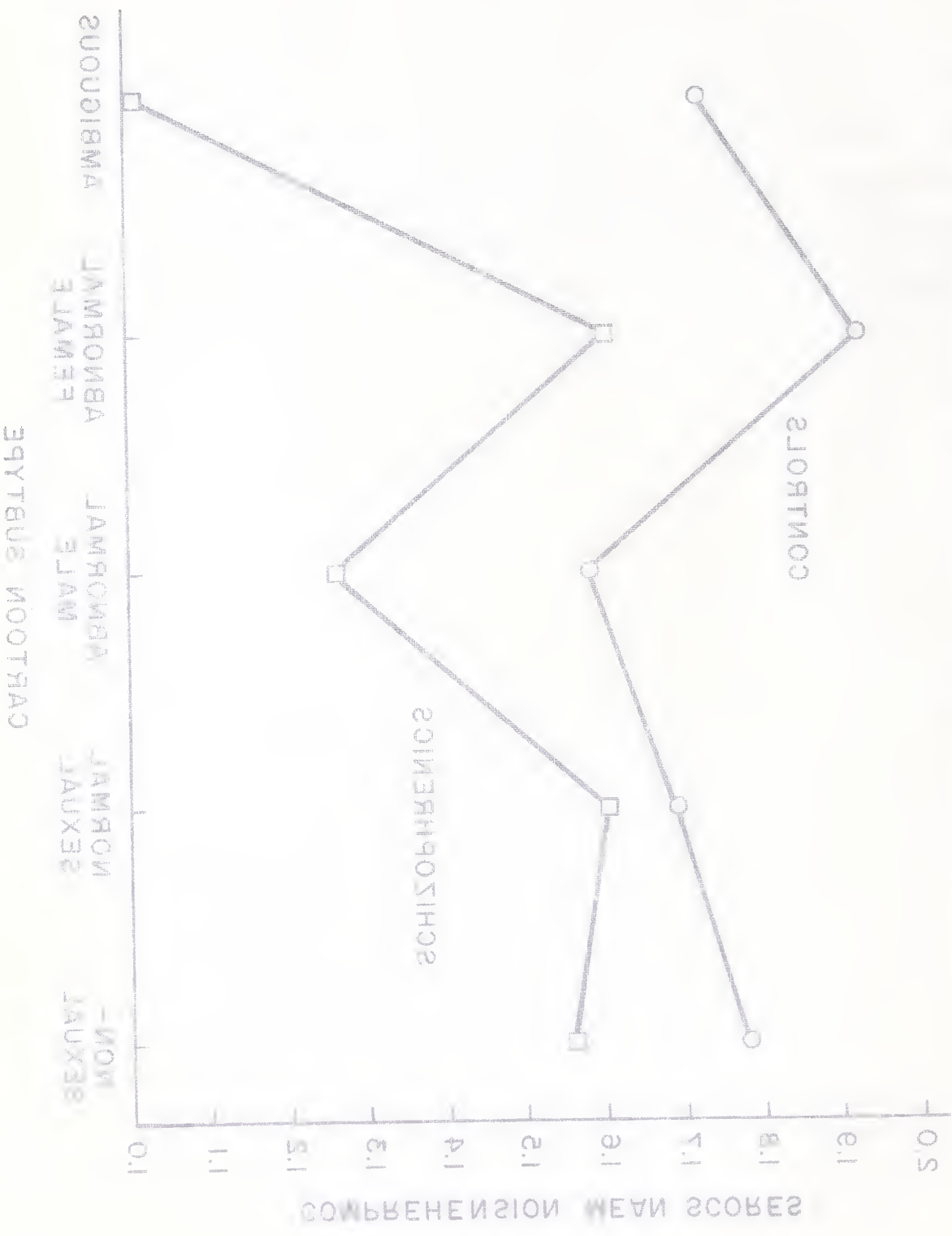


TABLE II

## COMPREHENSION BY CARTOON TYPE

Group	N	Normal Mean	Cartoons S.D.	Abnormal Mean	Cartoons S.D.
Schizophrenics					
male	20	1.64	0.47	1.27	0.37
female	20	1.52	0.32	1.35	0.33
total	40	1.58	0.40	1.31	0.35
Controls					
male	10	1.96	0.07	1.86	0.18
female	10	1.51	0.42	1.56	0.26
total	20	1.73	0.37	1.71	0.27
All males	30	1.75	0.41	1.47	0.42
All females	30	1.52	0.35	1.42	0.32
All subjects	60	1.63	0.40	1.44	0.37

## PREFERENCE SCORES BY CARTOON TYPE

Schizophrenics					
male	20	1.51	0.25	1.14	0.38
females	20	1.36	0.24	1.24	0.43
total	40	1.44	0.25	1.19	0.40
Controls					
male	10	1.48	0.32	1.28	0.39
female	10	1.34	0.28	1.31	0.31
total	20	1.41	0.30	1.29	0.34
All males	30	1.50	0.27	1.18	0.38
All females	30	1.36	0.25	1.26	0.39
All subjects	60	1.43	0.27	1.22	0.38



### The Individual Cartoons

An analysis of the comprehension of specific cartoons revealed significant differences in the responses of schizophrenics and controls. Six of the twenty cartoons differentiated schizophrenics from controls; all six were in the abnormal group of cartoons and in each case schizophrenics had significantly lower comprehension scores than controls. Two of them were abnormal male cartoons: "Poll" represents a "Casper Milk-toast" (schizophrenics lower comprehension,  $p$  less than .05) and "Son" shows the father in a dress admiring himself at the mirror while mother tells the boy, "Well, son, you're the man of the house now". (schizophrenics lower comprehension than controls,  $p$  less than .01). Two more of the cartoons which separated schizophrenics from controls were in the abnormal female sub-group. In "Tommy" a girl dressed only in her underwear greets her startled caller, "Why, Tommy, you're early." (schizophrenics less comprehension than controls,  $p$  less than .005). In the cartoon "Dukes" a burly woman challenges a man, apparently her husband, to a fight, "C'mon, put up yer dukes!" (schizophrenics lower comprehension than controls,  $p$  less than .05).

Finally, both cartoons in the ambiguous sexual identity sub-group separated schizophrenics from controls. "Zelda" shows a man at a side-show looking at Zelda, the "half-man, half-woman", whose left half is male and right half female; the man imagines the female half naked but does not imagine the masculine half at all. Schizophrenics had lower



comprehension ( $p$  less than .005) and lower preference ( $p$  less than .05).

"Heart" shows a patient with a beard and breasts who is covering the genital area; the doctor says, "Well at least your heart's in the right place." Schizophrenics had not only lower comprehension ( $p$  less than .0005) and lower preference ( $p$  less than .05), but also lower mirth than controls ( $p$  less than .05).

By comprehension scores none of the abnormal cartoons differentiated males from females, but four of the normal cartoons did. Two of them were normal sex cartoons. In "Sundays," a woman on a raft approaches a tropical island where there is already one man and six women. The man says, "Dammit, there goes my Sundays." Men understood this cartoon far better than women ( $p$  less than .0005). In "Speed," a man in an office has paused to admire a shapely secretary. Nearby someone has placed a sign which reads: "Resume Speed." Men had greater comprehension than women ( $p$  less than .01). Both of these cartoons represent masculine views of sex: staring at the beautiful secretary and accommodating sexually seven women per week, one for each day. Also "Speed" may provoke in women a concern about their own sex appeal. Thus it should come as no surprise that women understood these cartoons significantly less than men. As Levine and Redlich point out, failure to understand humor may be "really a hidden wish not to understand the humor." (20)

Men understood two of the non-sexual cartoons better than women: "Firemen" ( $p$  less than .05) and "Smoking" ( $p$  less than .05). In the





former, two firemen using the opposite ends of the same hose are putting out a fire; it is nonsense since there is no apparent source for the water. "Smoking" depicts a man about to be executed by a firing squad who turns down a last cigarette, "It's awfully kind of you, but I'm trying to give up smoking." Why women found these cartoons harder to understand is open to speculation.



TABLE III

## COMPREHENSION BY SUB-GROUP

Group	N	Non-sexual		Normal sexual		Abnormal male		Abnormal female		Ambiguous identity	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Schizophrenics											
Male	20	1.61	0.50	1.67	0.47	1.23	0.40	1.45	0.52	1.12	0.58
Female	20	1.51	0.41	1.53	0.33	1.29	0.45	1.75	0.39	0.90	0.48
Total	40	1.56	0.45	1.60	0.41	1.26	0.42	1.60	0.48	1.01	0.54
Controls											
Male	10	1.94	0.14	1.98	0.06	1.78	0.29	1.97	0.10	1.90	0.21
Female	10	1.62	0.39	1.40	0.52	1.38	0.44	1.87	0.23	1.55	0.50
Total	20	1.78	0.33	1.69	0.47	1.58	0.42	1.92	0.18	1.72	0.41
Total Male	30	1.72	0.44	1.77	0.41	1.41	0.45	1.62	0.49	1.38	0.61
Total Female	30	1.55	0.40	1.49	0.40	1.32	0.45	1.79	0.34	1.12	0.57
Total Subjects	60	1.63	0.43	1.63	0.42	1.37	0.45	1.70	0.43	1.25	0.59



Two other cartoons separated men from women in significant ways. The cartoon "Cooking" was liked more by females than by males ( $p$  less than .05). It is in the abnormal male sub-group and shows two men dressed in aprons who are talking to each other by telephone about a recipe. As it is a bit hostile to men, it is not surprising that men did not like it as much as women did. Men had a greater mirth response than women to "Bath-house" ( $p$  less than .01) in which a man in a bathing suit is looking at the doors of some dressing rooms and imagining that women are undressing behind them. Once again this is an example of the masculine view usually portrayed in normal sexual humor.



TABLE IV

PREFERENCES BY SUB-GROUP

Group	N	<u>Non-sexual</u>		<u>Normal sexual</u>		<u>Abnormal male</u>		<u>Abnormal female</u>		<u>Ambiguous identity</u>		
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
Schizophrenics												
	Male	20	1.40	0.34	1.62	0.36	1.09	0.48	1.33	0.47	0.95	0.69
	Female	20	1.28	0.36	1.45	0.44	1.36	0.52	1.38	0.51	0.73	0.70
Total	40	1.34	0.35	1.53	0.41	1.22	0.51	1.36	0.49	0.84	0.69	
Controls												
	Male	10	1.32	0.44	1.64	0.34	1.16	0.39	1.50	0.50	1.25	0.68
	Female	10	1.20	0.46	1.48	0.36	1.20	0.31	1.43	0.47	1.40	0.66
Total	20	1.26	0.45	1.56	0.35	1.18	0.34	1.47	0.48	1.32	0.65	
Total Male	30	1.37	0.37	1.63	0.35	1.11	0.44	1.39	0.48	1.05	0.69	
Total Female	30	1.25	0.39	1.46	0.41	1.31	0.46	1.40	0.49	0.95	0.75	
Total Subjects	60	1.31	0.38	1.54	0.39	1.21	0.46	1.40	0.48	1.00	0.71	

Group	No. of specimens	Mean length (mm)	Standard error (mm)	Approximate frequency	Approximate percentage
100-150	1	110	10	1	1
150-200	1	150	10	1	1
200-250	1	200	10	1	1
250-300	1	250	10	1	1
300-350	1	300	10	1	1
350-400	1	350	10	1	1
400-450	1	400	10	1	1
450-500	1	450	10	1	1
500-550	1	500	10	1	1
550-600	1	550	10	1	1
600-650	1	600	10	1	1
650-700	1	650	10	1	1
700-750	1	700	10	1	1
750-800	1	750	10	1	1
800-850	1	800	10	1	1
850-900	1	850	10	1	1
900-950	1	900	10	1	1
950-1000	1	950	10	1	1

TABLE 10  
FREQUENCY OF SIZE GROUPS



## DISCUSSION

### Mirth

In previous studies with the mirth response test, mirth was always a very significant variable; this was not true of this study. In fact, very little mirth was observed in any of the groups of subjects. An important feature of the present study was that all subjects were hospitalized. In the past control groups have been drawn from non-hospitalized populations. The controls for this study, though not seriously ill, were, nonetheless hospitalized for medical reasons at the time the tests were administered. It is reasonable to suppose that people will be less likely to laugh while affected by medical illness sufficiently serious to require hospitalization. There was no reason to expect hospitalization to impair cognitive function, and, in fact, comprehension did not appear to be affected.

Another factor which might account for the low mirth scores is that the psychiatric patients, for the most part, were taking some medication, usually a major tranquillizer. This would be expected to inhibit all affective expression including mirth response, but not cognitive ability.

### Correlations

On the basis of previous findings it would be expected that there would be high correlations between cartoon mirth, preference and comprehension.



This expectation has face validity; one would expect individuals to show more mirth in response to those cartoons they like and understand. These expectations were only partially fulfilled.

For the total group ( $N$  equals 60) mean comprehension had a rough correlation with mean mirth score ( $r$  equals 0.2133,  $p$  less than 0.1). The mean comprehension score for abnormal cartoons correlated with mean mirth for all cartoons ( $r$  equals 0.2676,  $p$  less than .05), with mean mirth for normal cartoons ( $r$  equals 0.2686,  $p$  less than .05), and with mean mirth for the abnormal cartoons ( $r$  equals 0.2424,  $p$  less than 0.1).

Among the controls ( $N$  equals 20) there were several statistically significant correlations. For the normal cartoons, comprehension correlated with preference scores ( $r$  equals 0.5108,  $p$  less than .05). For the abnormal cartoons, mirth correlated with preference ( $r$  equals 0.4947,  $p$  less than .05), and for the total group of cartoons mirth correlated with preference ( $r$  equals 0.4330,  $p$  less than .05). Incidental correlations included mean comprehension for all cartoons with mean preference for normals ( $r$  equals 0.4372,  $p$  less than .05), mirth on abnormals with mean preference for all cartoons ( $r$  equals 0.4762,  $p$  less than .05), and mirth for all cartoons with mean preference for abnormal cartoons ( $r$  equals 0.4671,  $p$  less than .05).

Among the schizophrenics there were no significant correlations, but there were two trends. For the abnormal cartoons, comprehension correlated with mirth ( $r$  equals 0.3032,  $p$  less than 0.1). Also, comprehension



for the abnormal cartoons correlated with the mean mirth score for all cartoons ( $r$  equals 0.2874,  $p$  less than 0.1).

Among males and females there were further correlations, some significant and others merely trends. For the men in the case of the abnormal cartoons comprehension correlated with mirth ( $r$  equals 0.3951,  $p$  less than .05) and with preference scores ( $r$  equals 0.3487,  $p$  less than .05). Other correlations included comprehension of the abnormals with mirth for all cartoons ( $r$  equals 0.3838,  $p$  less than .05) and with mirth for the normal cartoons ( $r$  equals 0.3308,  $p$  less than 0.1) and mean preference for the abnormals with comprehension for all cartoons ( $r$  equals 0.3238,  $p$  less than .05). Finally, for females ( $N$  equals 30), mean comprehension for all cartoons correlated as a negative trend with preference of the abnormal cartoons ( $r$  equals minus 0.3061,  $p$  less than 0.1).



## CONCLUSIONS

The present findings confirm the hypothesis that schizophrenics have difficulty in the area of sex-role identifications. Their difficulty in appreciating humorous cartoons which depict unusual or abnormal sex-roles leads to this conclusion. In contrast with control subjects' responses and with their own good ability to understand typical sexual and non-sexual cartoons, schizophrenics failed to comprehend cartoons which portrayed men and women in abnormal sex-roles.

According to the psycho-analytic theory of humor, there is an association between anxiety and the appreciation of humor. For Freud, "people laugh when they momentarily gratify a forbidden wish,"<sup>(5)</sup> and Kris added that "humor is based on already mastered anxiety while at the same time its function is to overcome anxiety."<sup>(10)</sup> Through the joke-work of condensation, displacement, distortion, playfulness and absurdity an anxiety-provoking situation can be experienced without the anxiety. Moreover, as Levine and Redlich have discussed<sup>(20)</sup> the failure to understand humor in people of average intelligence is often the result of distortions of the joke or cartoon; to understand it fully would provoke too much anxiety. This happens when the joke brings up a problem for a person with which he cannot cope.

These theoretical considerations help to explain the results of this study. All the subjects preferred the normal cartoons to the abnormal





cartoons, and both controls and schizophrenics understood the normal cartoons well. The abnormal group was disliked by all the subjects, but the controls understood them as well as they understood the normal cartoons. Thus for the controls, any anxiety evoked by the abnormal sex-role cartoons did not interfere with their understanding. Presumably, this is because the controls had normal sex-role identifications in their development and when faced with jokes about abnormal roles could cope with the situation. By contrast, the schizophrenics' comprehension of the abnormal cartoons was significantly reduced. This finding supports the notion that schizophrenics failed to have normal sex-role identifications in their formative years, and when confronted with jokes about abnormal roles they cannot cope with the situation. Consequently they distort the content, thereby avoiding full comprehension and the concomitant anxiety.

An additional finding in this study was that men had greater comprehension of the cartoons than did women. This was particularly interesting in that the women had lower comprehension of the normal sex cartoons. Factors which may help to explain this are that most, if not all, of the cartoons in this version of the Mirth Response Test were drawn by men and all of them were selected by men. Furthermore, for Freud, sexual humor is characteristically the activity of men. It is meant for men and at the expense of women. Men tell "dirty jokes" when they are alone together and these jokes often veil some aggression



towards women. So, faced with examples of normal sex humor in cartoons, women distort what they see and fail to understand the jokes.



## SUMMARY

In the present study 40 hospitalized schizophrenics (20 male and 20 female) and 20 non-schizophrenic, hospitalized medical patients as controls (10 male and 10 female) were tested with a Mirth Response Test consisting of 10 normal and 10 abnormal cartoons. It was predicted that schizophrenics would have difficulty understanding the abnormal cartoons because of a failure in identification with normal sex-roles. This hypothesis was confirmed. In addition, a difference in humor behavior between males and females was demonstrated and discussed. The role-preference and body-parts satisfaction tests with which McClelland and Watt<sup>(22)</sup> showed sex-role alienation did not prove to be significant measures in the present study, possibly because of differences in duration of hospitalization of the groups of subjects.



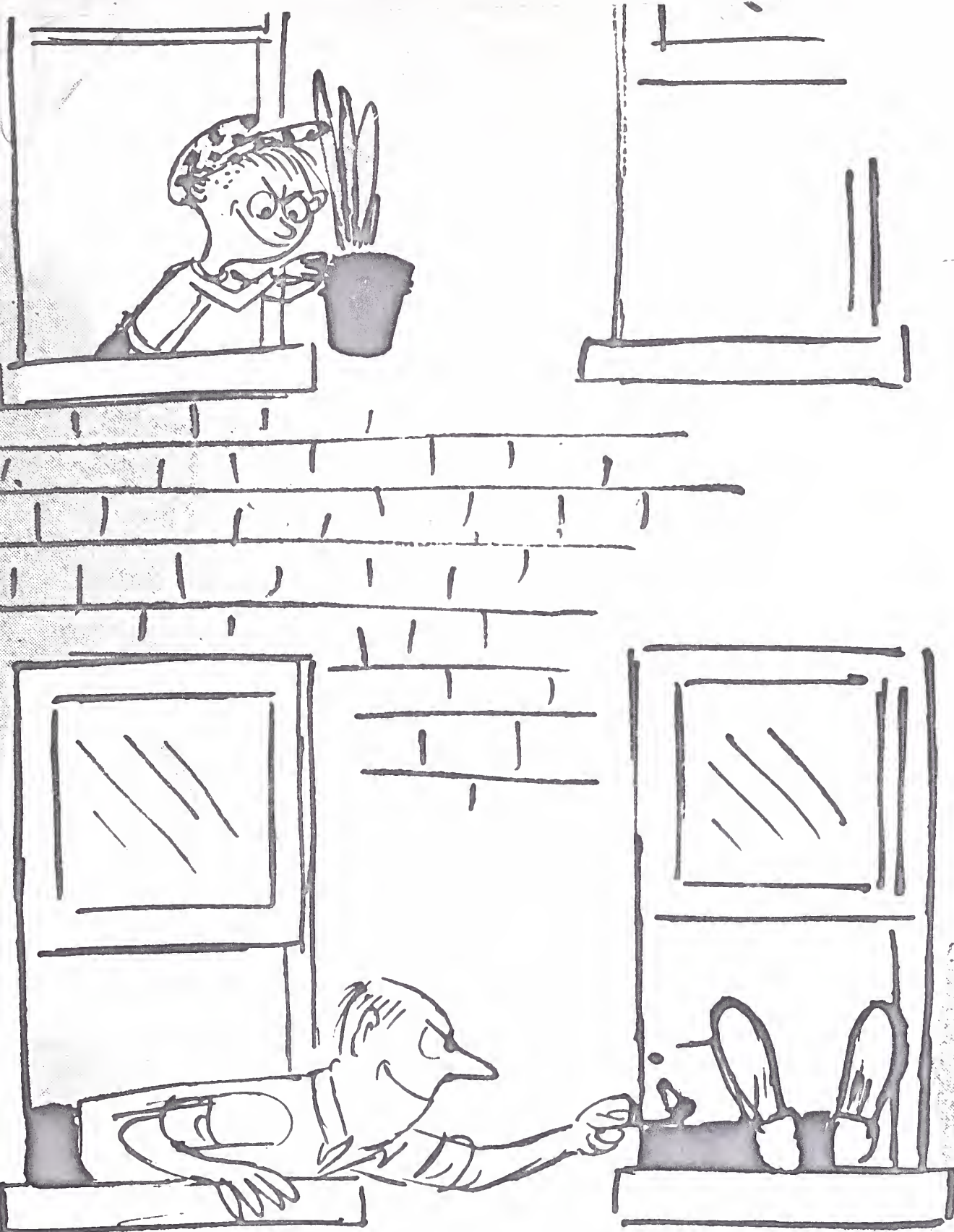
## APPENDIX

The twenty cartoons of this Mirth Response test follow this page and are arranged in the order in which the subject saw them.

Cartoon	Sub-type
1. Hotfoot	Non-sexual
2. Sweater	Normal sex
3. Barroom	Abnormal male
4. Zelda	Ambiguous identity
5. Tommy	Abnormal female
6. Firemen	Non-sexual
7. Maternity	Abnormal male
8. Bath house	Normal sex
9. Back seat	Abnormal female
10. Smoking	Non-sexual
11. Heart	Ambiguous identity
12. Cooking	Abnormal male
13. Yoo-hoo	Normal sex
14. Scale	Non-sexual
15. Poll	Abnormal male
16. Sundays	Normal sex
17. Dukes	Abnormal female
18. Pole	Non-sexual
19. Speed	Normal sex
20. Son	Abnormal male

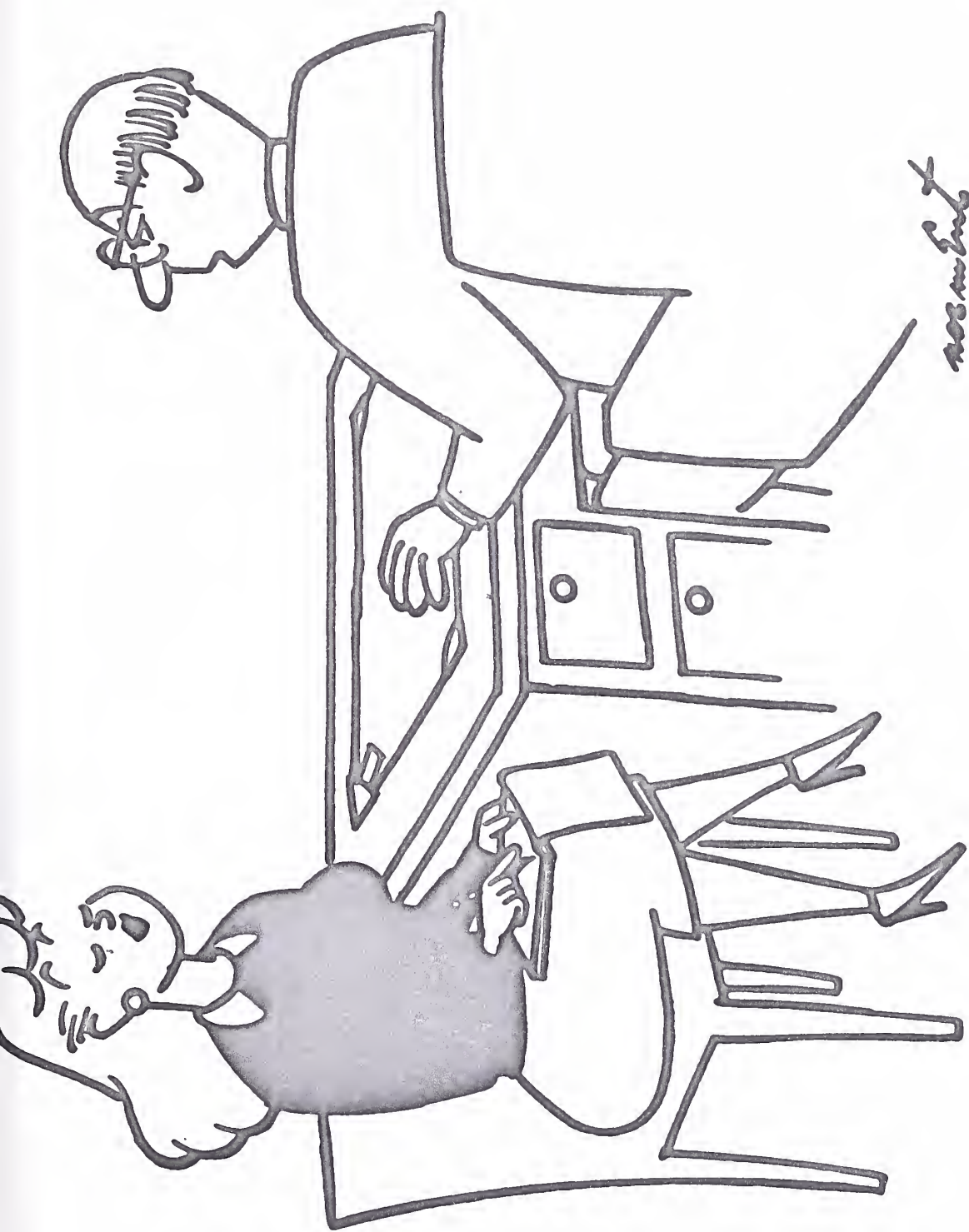






*la mandola*  
ARGOSY MAGAZINE

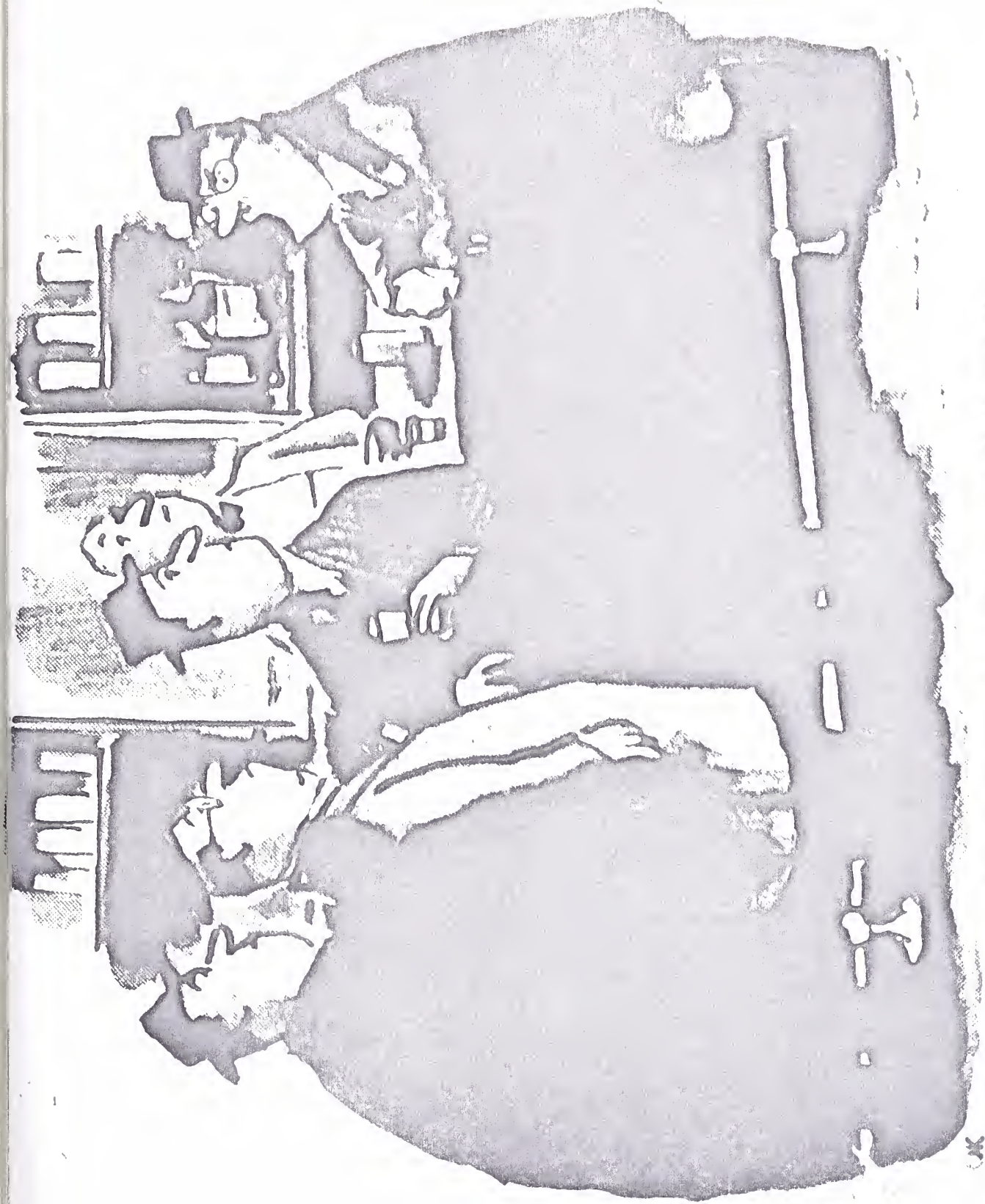




**“James Cantwell . . . Cantwell Construction Company. Dear Sweater . . .”**



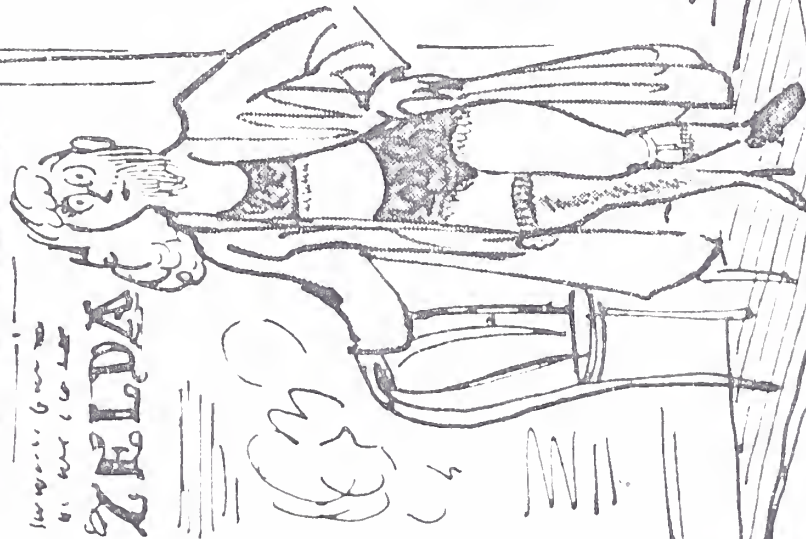




*"Any man in the house can lick me!"*



HALF-MAN  
HALF-WOMAN



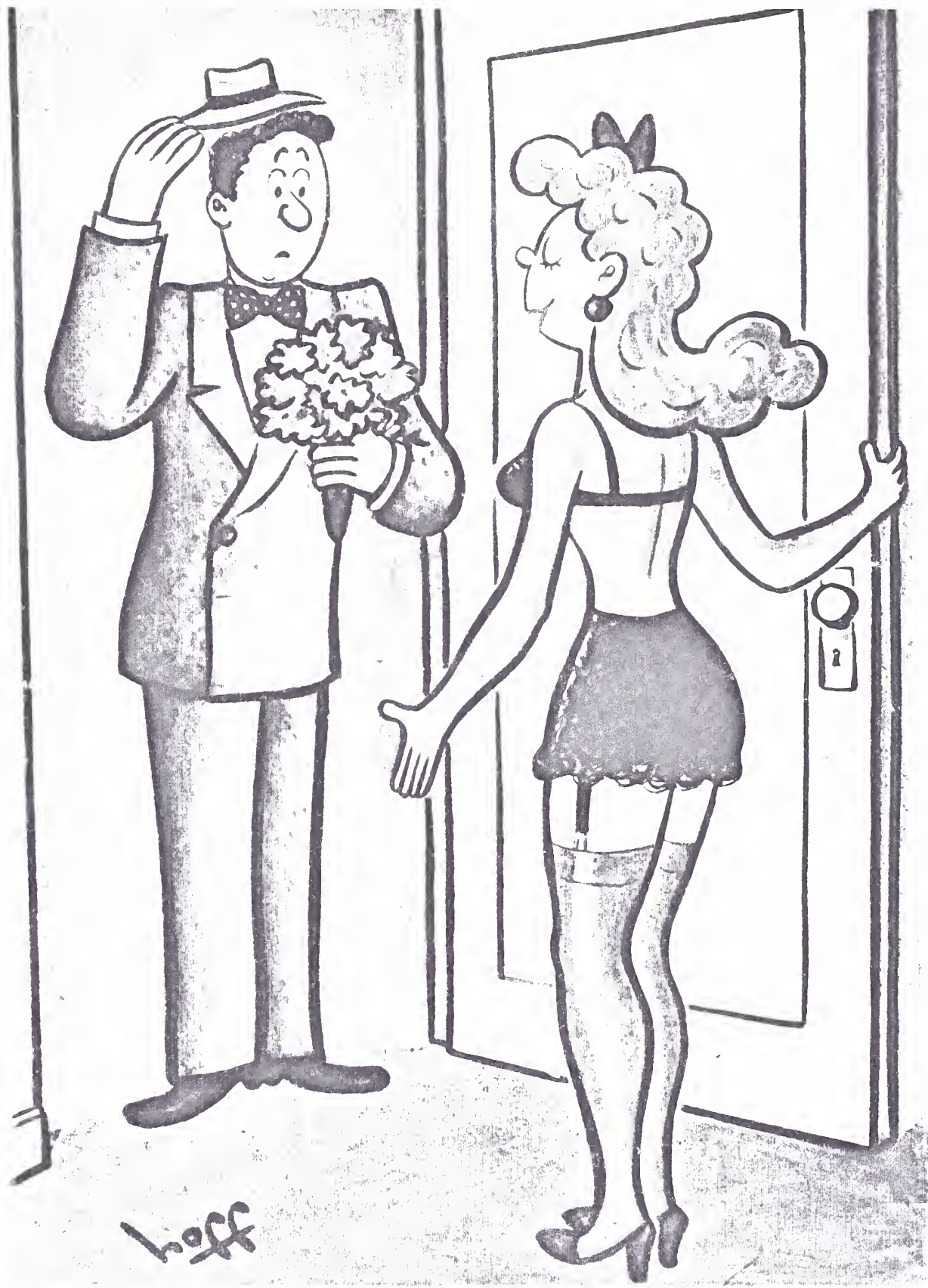
ZELDA

WORLD'S



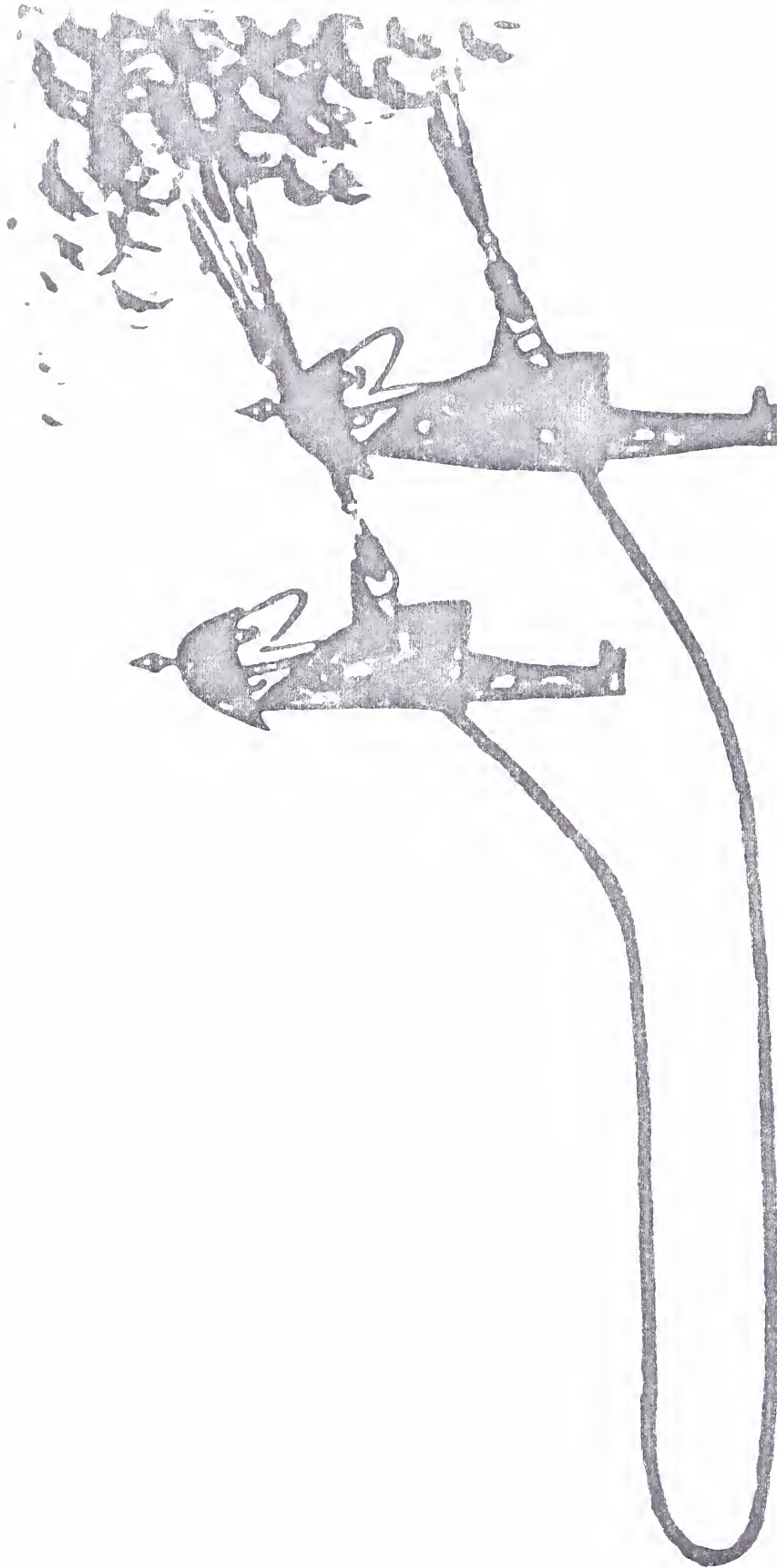




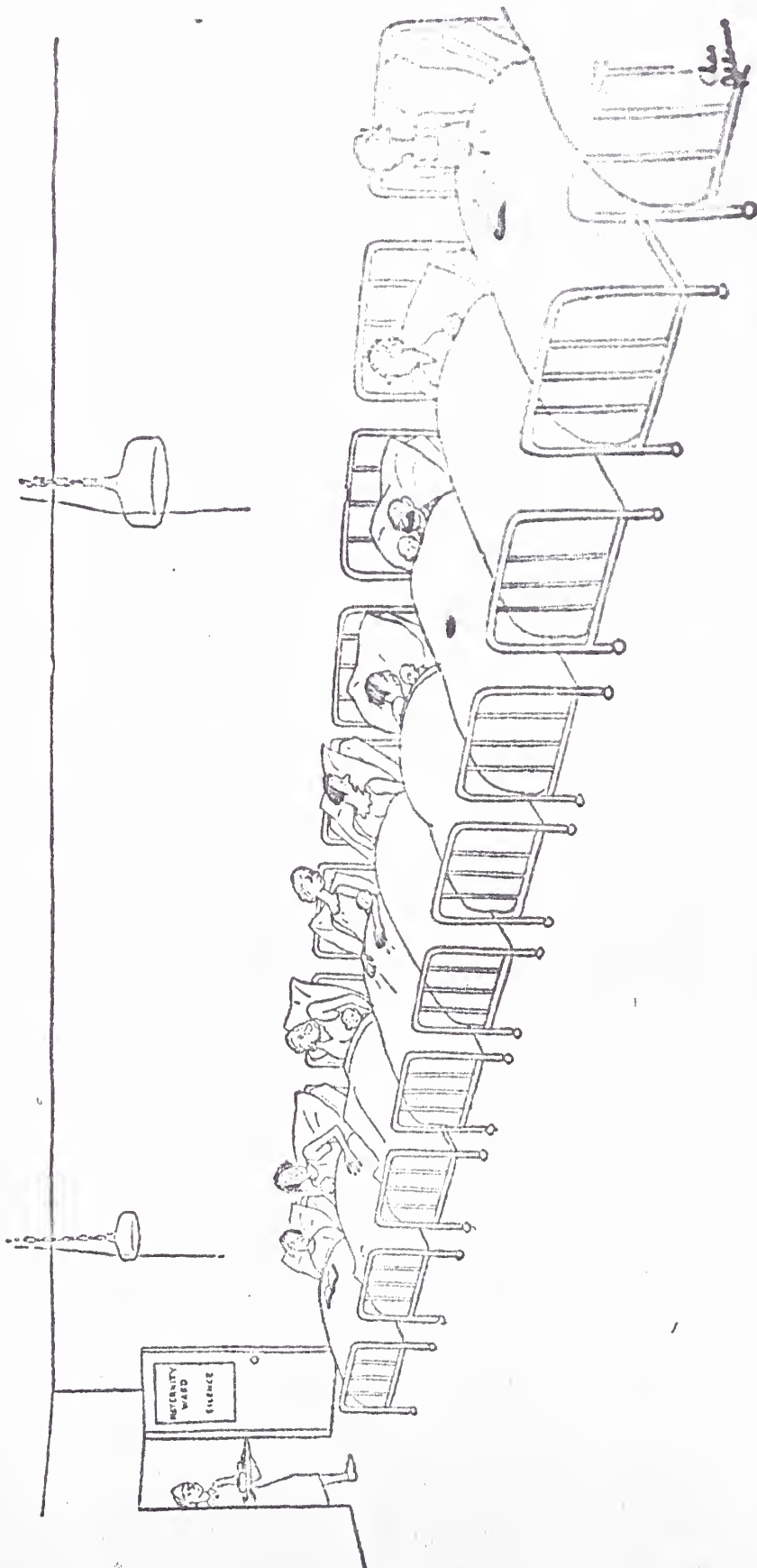


"Why, Tommy—you're early!"



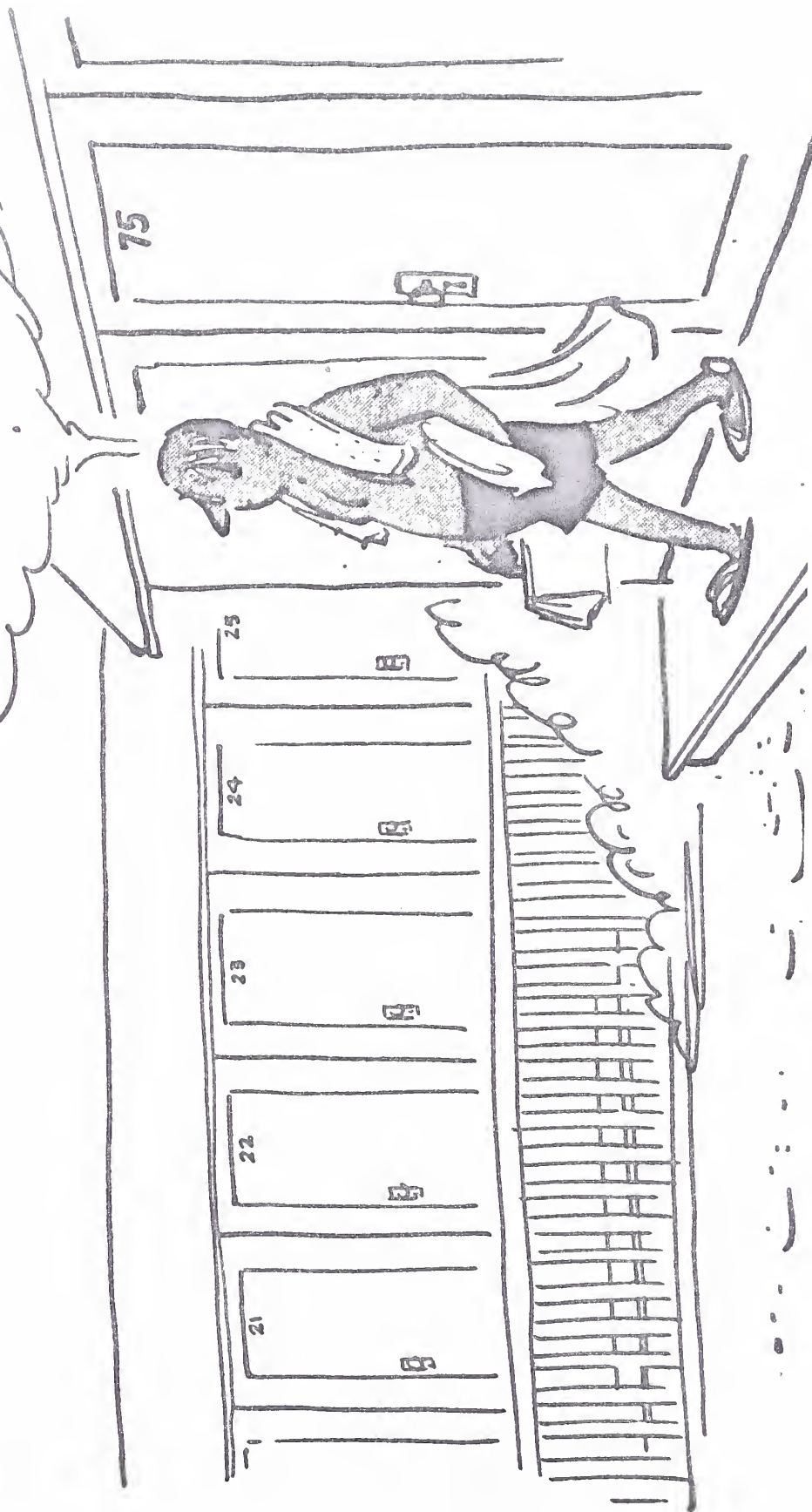


















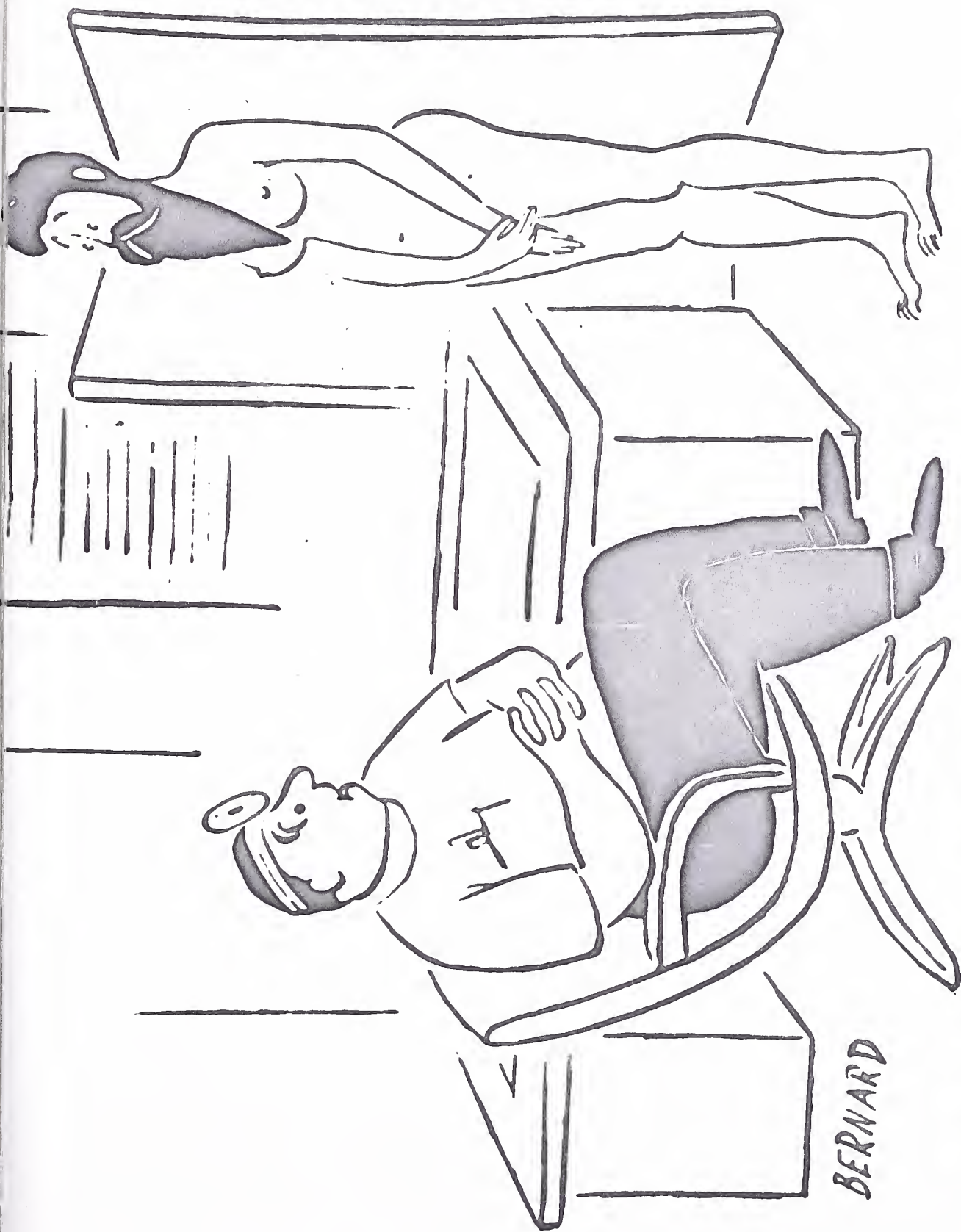




*"It's awfully kind of you, but I'm trying to give up smoking."*

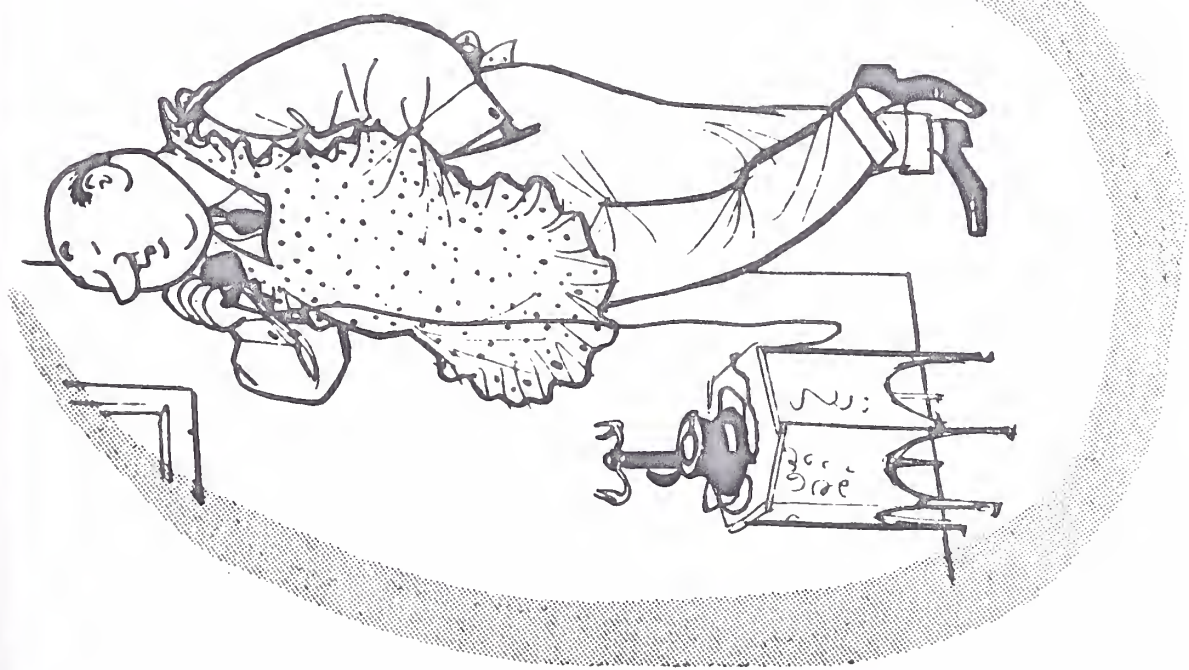






**"Well, anyhow, at least your heart's in the right place."**

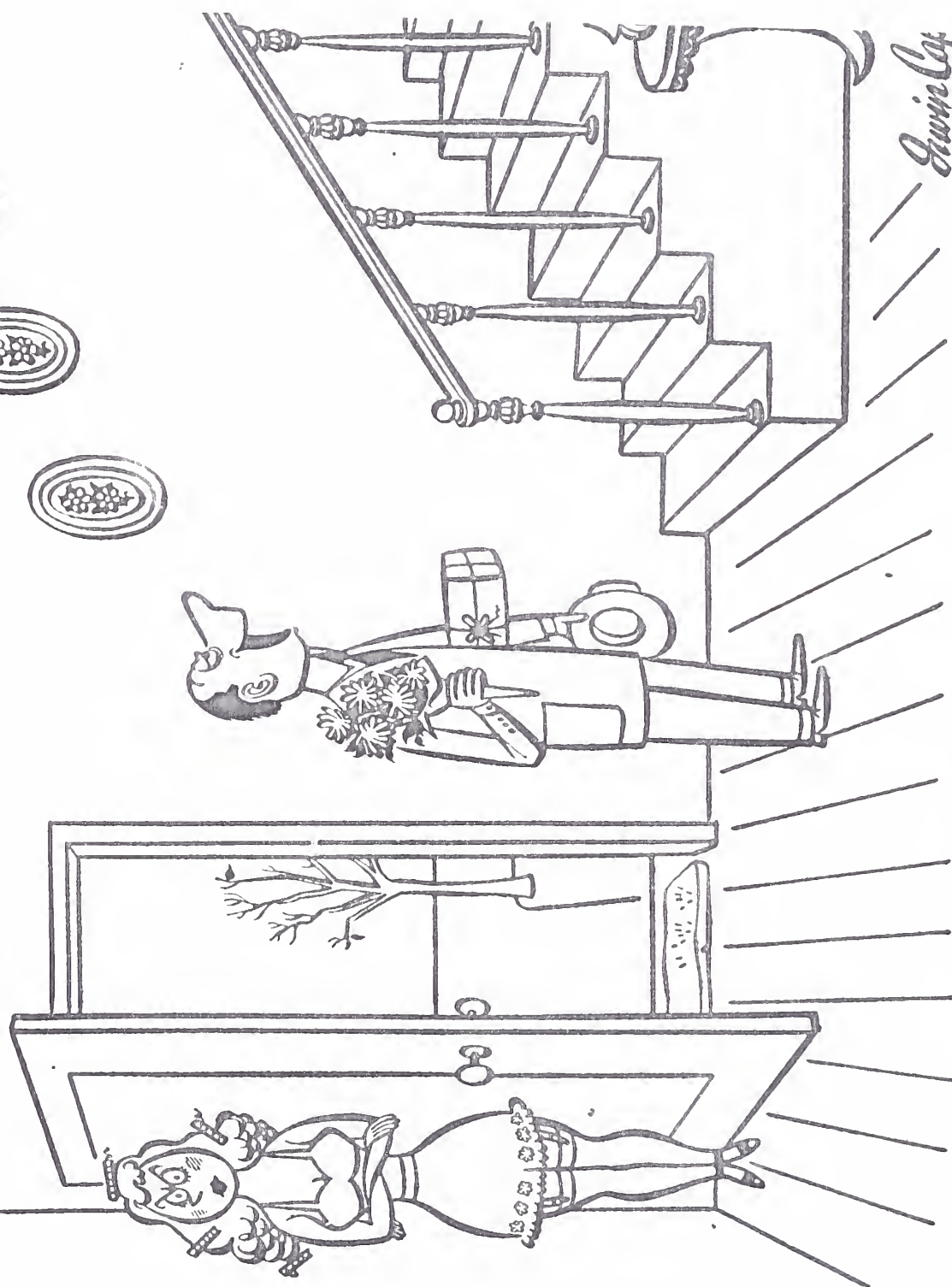




“... You add mushrooms, pour in a glass of calvados, and then put in the cream...”







"Yoo-hoo, Miss Reed, I'm here early, yoo-hoo . . ."

THE SATUR

*Gwin Cap*





Con  
Scorzi





*"I'm from the Institute  
of Public Opinion. Er—a—is your wife in?"*







"Dammit. Here goes my Sundays."







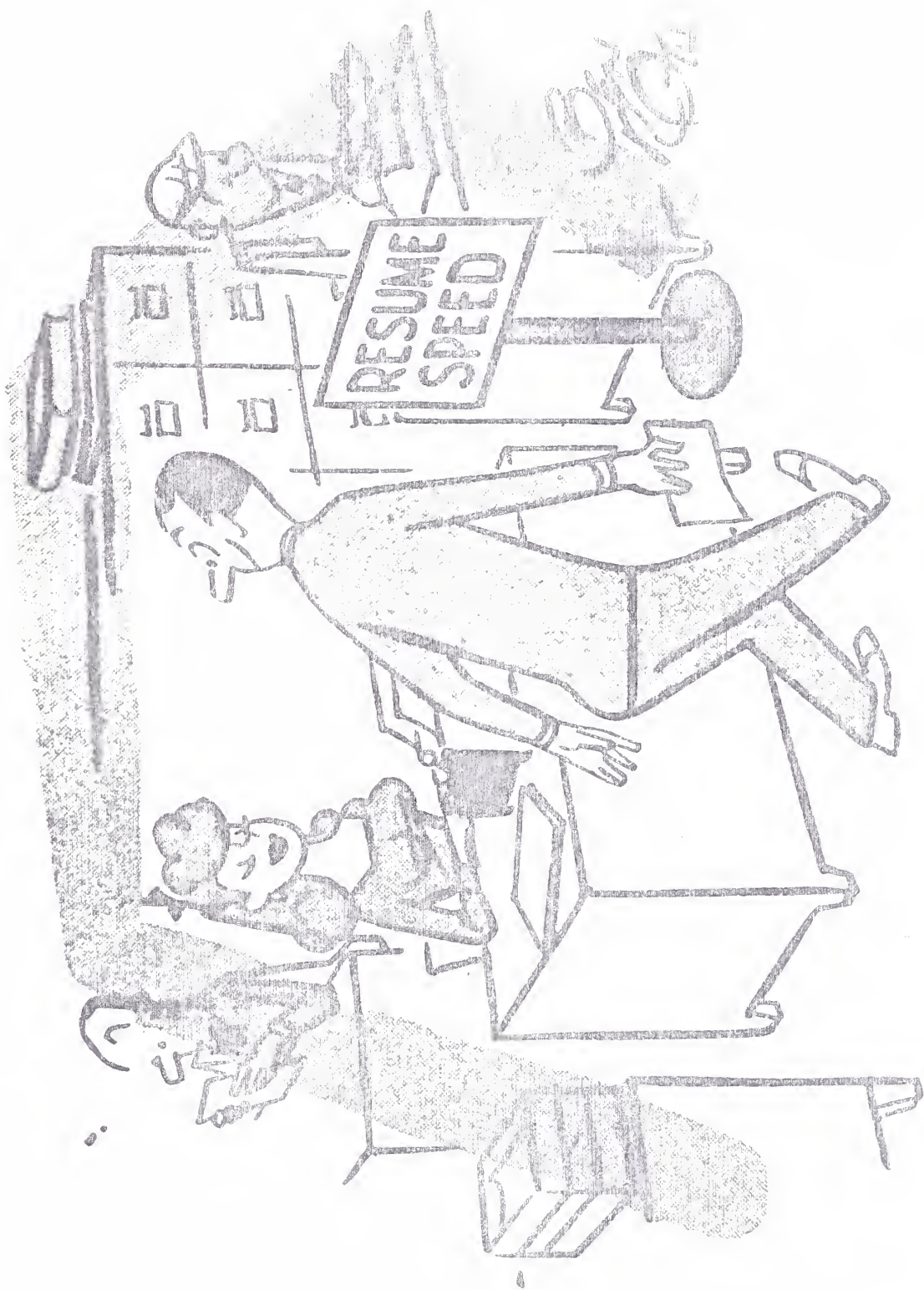
"C'mon, put up yer dukes!"



Chen  
Day

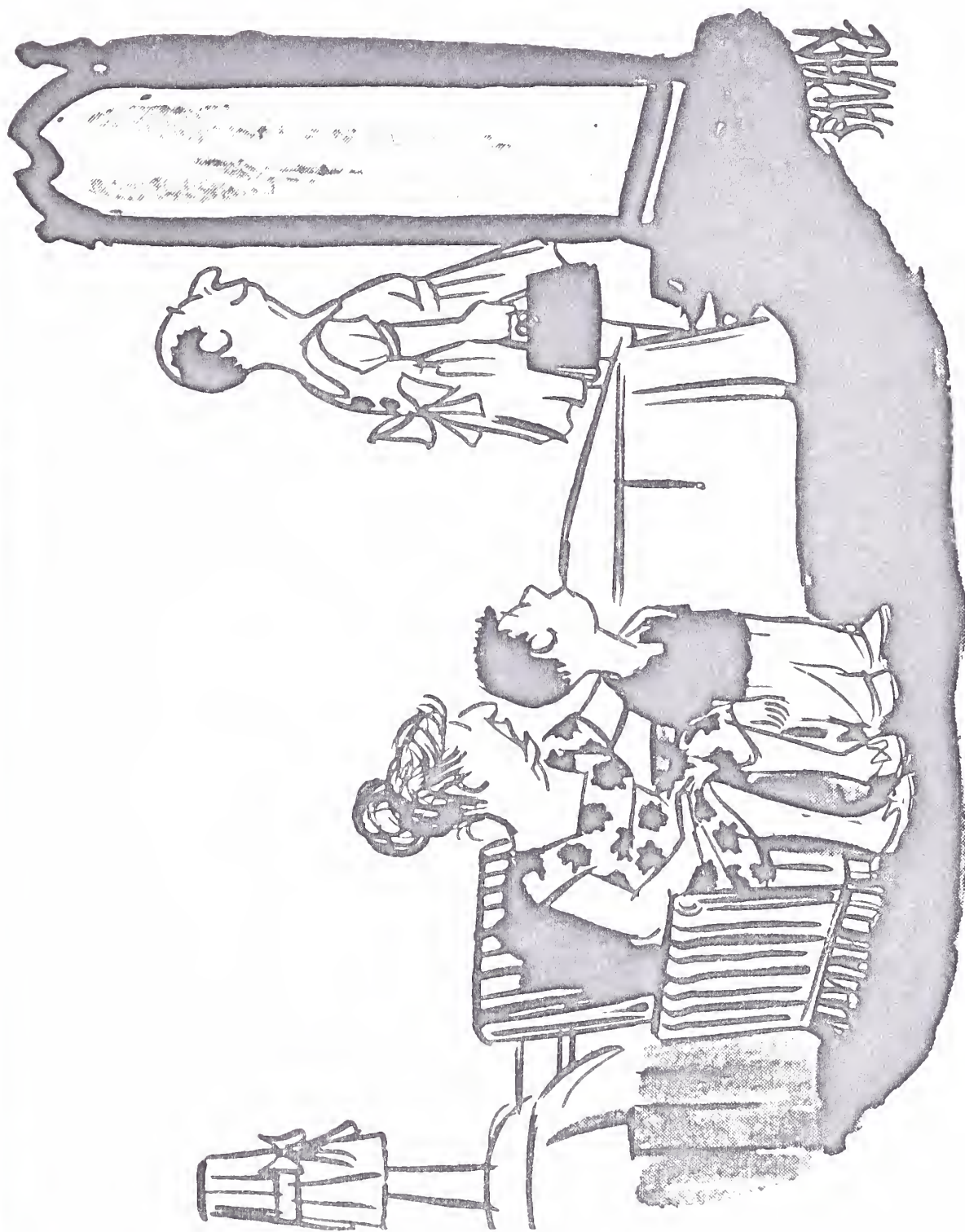












*"Well, son, you're the man of the house now."*





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